A3. CLEANING OF EQUIPMENT FOR WATER SAMPLING

Equipment cleaning (decontamination): Applying cleaning solutions to the surfaces of equipment or using other nondestructive procedures (such as steam cleaning) to remove foreign substances that could affect the concentrations of analytes in samples.

USGS policy requires that equipment for water samples be properly cleaned before contacting the sample and that the effectiveness of cleaning procedures be quality controlled (Sandstrom, 1990; Horowitz and others, 1994; Koterba and others, 1995). The goal of equipment cleaning is to help ensure that the equipment is not a source of foreign substances that could affect the ambient concentrations or chemistry of target analytes in samples. Standard procedures are described in this chapter for when, where, and how to clean equipment constructed of various materials and to collect equipment blanks and field blanks for quality control. Space is commonly dedicated in an office laboratory for equipment cleaning and for storage of cleaning supplies. In this report this work space can include the Field Service Unit or other dedicated office space.

- Clean all sample-collection and sample-processing equipment before use.
  - Manufacturing residues must be removed from new equipment.
  - Dust and any other foreign substances must be removed from equipment that has been in storage.
  - Substances adhering to equipment from previous sampling must be removed.
- Prevent cross contamination between sampling sites by rinsing equipment with deionized water (DIW) while equipment is still wet, and then clean equipment as prescribed in this chapter before transporting it to the next site.
- Do not substitute field rinsing with sample water for the equipment-cleaning procedures described in this chapter.
- Collect equipment blanks and field blanks for quality control. A minimum of one equipment blank per year is required for each piece of equipment. The frequency of collecting blanks normally is based on study objectives and site conditions.

To help prevent sample and site contamination, be sure to use properly cleaned equipment.